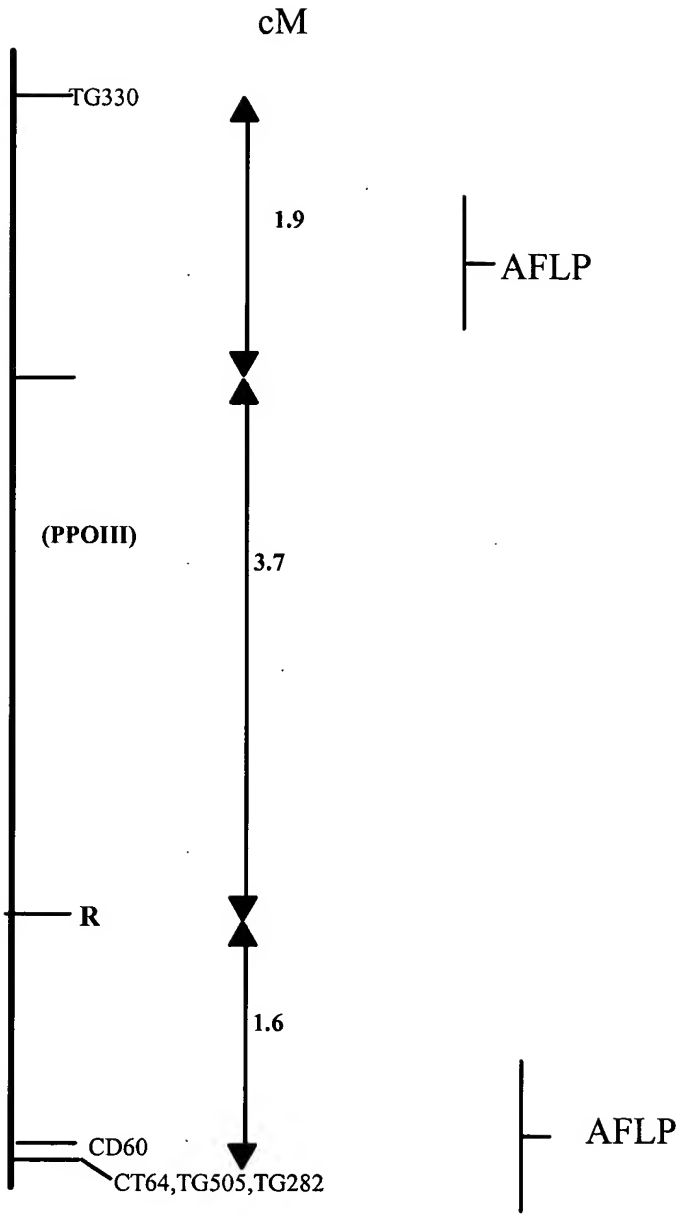
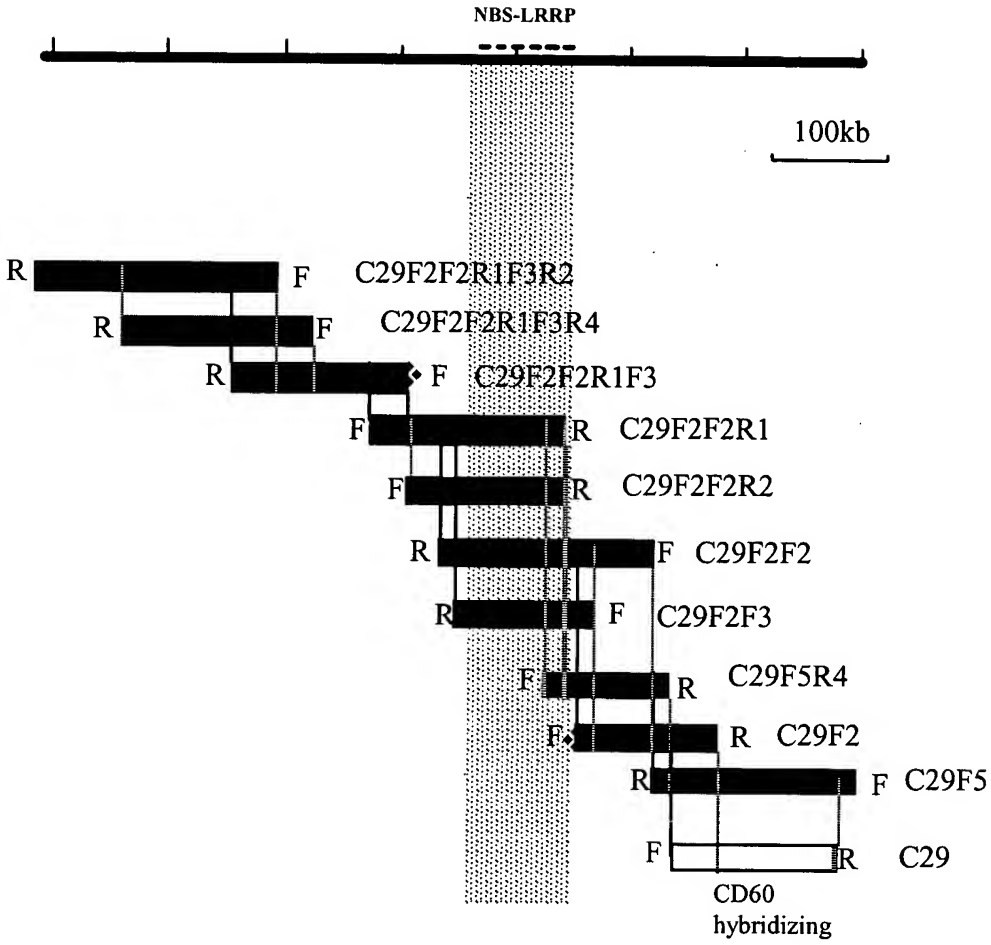


FIG. 1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100kb
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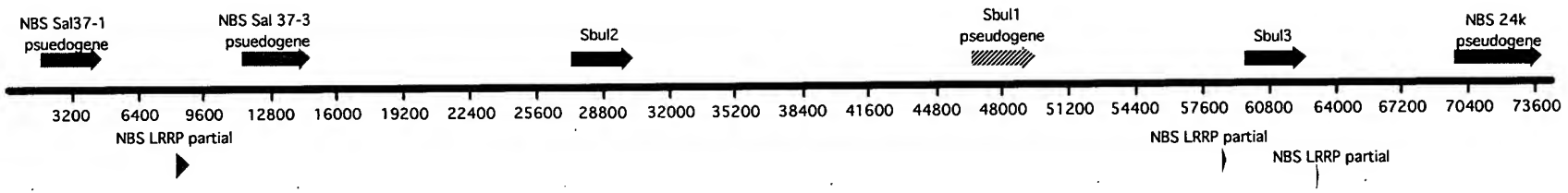
R F C29F2F2R1F3R4
R F C29F2F2R1F3
F R C29F2F2R1
F R C29F2F2R2
R F C29F2F2
R F C29F2F3
F R C29F5R4
F R C29F2
R F C29F5
F R C29
CD60
hybridizing

FIG. 2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psuedogene
NBS Sal 37-3
psuedogene
Sbul2
Sbul1
pseudogene
Sbul3
NBS 24k
pseudogene
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6400
9600
12800
16000
19200
22400
25600
28800
32000
35200
38400
41600
44800
48000
51200
54400
57600
60800
64000
67200
70400
73600
NBS LRRP partial
NBS LRRP partial
NBS LRRP partial

FIG. 3

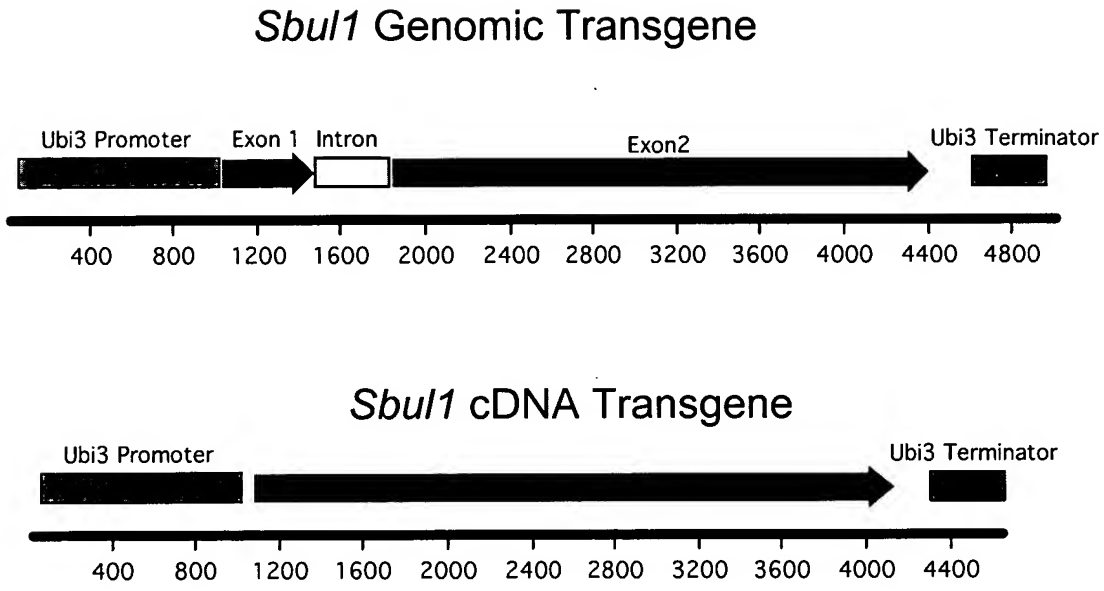
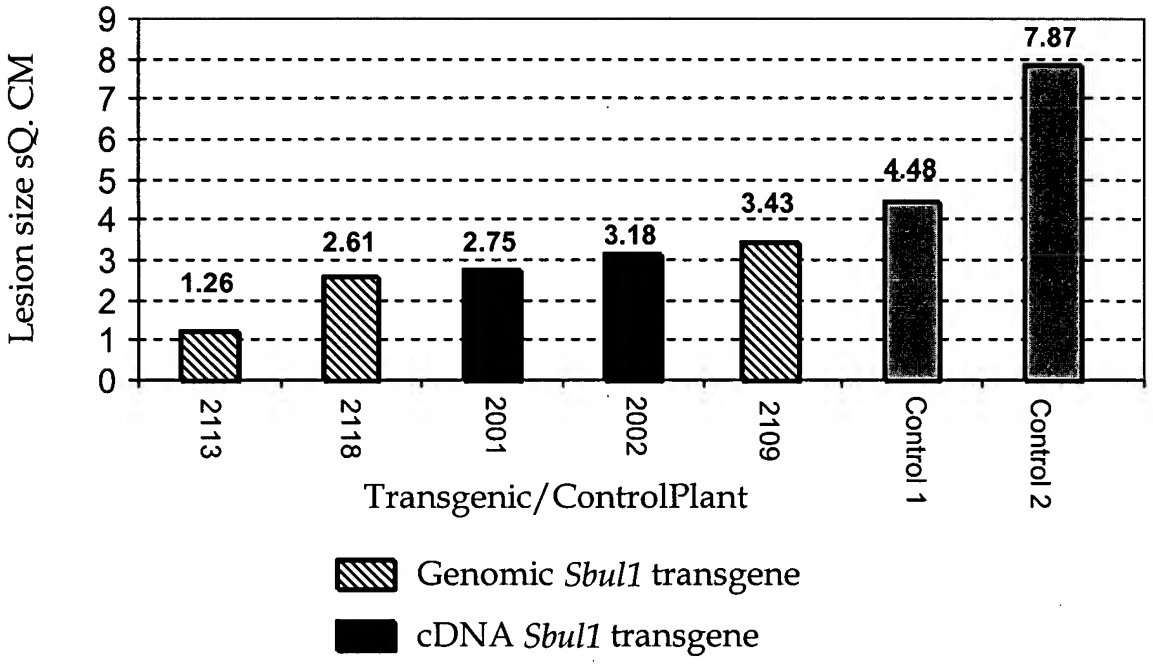

Sbul1 Genomic Transgene
Ubi3 Promoter
Exon 1
Intron
Exon2
Ubi3 Terminator
400
800
1200
1600
2000
2400
2800
3200
3600
4000
4400
4800
Sbul1 cDNA Transgene
Ubi3 Promoter
Ubi3 Terminator
400
800
1200
1600
2000
2400
2800
3200
3600
4000
4400

FIG. 4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8
7
6
5
4
3
2
1
0
1.26
2.61
2.75
3.18
3.43
4.48
7.87
2113
2118
2001
2002
2109
Control 1
Control 2
Transgenic/ControlPlant
Genomic Sbul1 transgene
cDNA Sbul1 transgene

FIG. 5

Alignment of *Sbul1* (SEQ ID NO:4) and *Sbul2* (SEQ ID NO:6) deduced Amino Acid sequences

```
Sbul1:  MAEAFLQVLLDNLTCFIQGELGLILGFKDEFEKLQSTFTTIQAVLEDAQKKQLKDKAIEN
Sbul2:  MAEAFLQVLLDNLTCFIQGEVGLILGFKDEFEKLQSTFTTIQAVLEDAQKKQLKDKAIEN

Sbul1:  WLQKLNAAAYEADDILDECKTEAPIRQKKNKYGCYHPNVITFRHKIGKRMKKIMEKLDVI
Sbul2:  WLQKLNAAVYEADDILDECKTEAPIRQKKNKYGCYHPNVIAFRHKIGKRMKKIMEKLDVI

Sbul1:  AAERIKFHLDERTIERQVATRQTG---Intron-------FVLNEPQVYGRDKEKDEIVK
Sbul2:  AAERIKFHLAERTTERQVATRQTG---Intron-------FVLNEPQVYGRDKEKDEIVK

Sbul1:  ILINNVSNAQTLPVLPILGMGGLGKTTLAQMVFNDQRVIEHFHPKIWICVSEDFNEKRLI
Sbul2:  ILINIVSDAQTLSVLPILGMGGLGKTTLAQMVFNDQRVIEHFLPKIWICVSEDFNEKRLI

Sbul1:  KEIVESIEEKSLGGMDLAPLQKKLRDLLNGKKYLLVLDDVWNEDQDKWAKLRQVLKVGA
Sbul2:  KEIVESIEEKSLGDMDLAPLQKKLQDLLNGKKYLLVLDDIWNEDQDKWAKLREVLKVGA

Sbul1:  SGASVLTTTRLEKVGSIMGTLQPYELSNLSQEDCWLLFMQRAFGHQEEINLNLVAIGKEI
Sbul2:  SGASILTTTRLEKVGSIMQTLQPYELSNLCQEDCWLLFMQRAFGHQEEINHNLVAIGKEI

Sbul1:  VKKCGGVPLAAKTLGGILRFKREERQWEHVRDSEIWKLPQEESSILPALRLSYHHLPLDL
Sbul2:  VKKCGGVPLAAKTLGGILRFKRQERQWEHVRDSEIWKLPQEESSILPALKLSYHHLPLDL

Sbul1:  RQCFTYCAVFPKDTEMEKGNLISLWMAHGFILSKGNLELENVGNEVWNELYLRSFFQEIE
Sbul2:  RQCFSYCAVFPKDTKMEKENLISLWMAHGFLLSKGNLELEDVGNEVWNELYLRSFFQEIE

Sbul1:  VKSGQTYFKMHDLIHDLATSLFSASTSSSNIREIIVENYIHMMSIGFTKVVSSYSLSHL
Sbul2:  VTYGKTYFKMHDLIHDLATSLFSASASSNNIREINVKGYPHMMSIGFAKVVSFYSRSHF

Sbul1:  QKFVSLRVLNLSDIKLKQLPSSIGDLVHLRYLNLSGNTSIRSLPNQLCKLQNLQTLDLHGC
Sbul2:  QKFVSLRVLNLSNLELKQLPSSIGDLVHLRYLNLSDNNRIRSLPKQLCKLQNLQTLDLRCC

Sbul1:  HSLCCLPKETSKLGSLRNLLLDGCYGLTCMPPRIGSLTCLKTLSRFVVGIQKKSCQLGELR
Sbul2:  YRLSCLPKETSKLGSLRNLLLDRCHGLTCMPPRIGSLTCLKTLDRFAMG-REKSPQIGELR

Sbul1:  NLNLYGSIEITHLERVKNDMDAKEANLSAKENLHSLSMKWDDDERPRIYESEKVEVLE
Sbul2:  NLNLYGSISITHLERVKNDMDAKEANLSSKENLHSLSMIWDEDERPHRYESEDVEVLE

Sbul1:  ALKPHSNLTCLTIRGFRGIRLPDWMNHSVLKNVVSIEIISCKNCSCLPPFGELPCLKSLEL
Sbul2:  ALKPHSNLTCLTIIGFRGIRLPDWMNHSVLKNVVSLEISDCKNCSCLPPFGELPCLNSLQL

Sbul1:  WRGSAEVEYVDSGFPTRRRFPSLRKLNIREFDNLKGLLKKEGEEQCPVLEEIEIKC
Sbul2:  WSGSAEVEYIDSGFPTRRRFPSLRKLIIGEFDNLKGLVKKEGEEQFPVLEEMEINW
```

FIG. 6A

```
Sbul1:      CPMFVIPTLSSVKKLVVSGDKSDAIGFSSISNLMALTSLQIRYNKEDASLPEEMFKSLANL
Sbul2:      CPMFVIPTLSSVNKLVVSGEESDAIGFSSISNLRALTSLNISYNSEATSLPEEMFKSLANL

Sbul1:      KYLNISFYFNLKELPTSLASLNALKHLEIHSCYALESLPEEGVKGLISLTQLSITYCEMLQ
Sbul2:      KYLNIYYFKNLKELPTNLASLNALKNLEIESCYALESLPEEGVKGLTSLTQLSITYCTMLQ

Sbul1:      CLPEGLQHLTALTNLSVEFCPTLAKRCEKGIGEDWYKIAHIPRVFIY*
Sbul2:      CLPEGLQHLTALTNLSVRDCPTLAKRCEKGIGEDWYKIAHIPDVFIR*
```

FIG. 6B

Alignment of *Sbul1* (SEQ ID NO:3) and *Sbul2* (SEQ ID NO:5) gene sequences

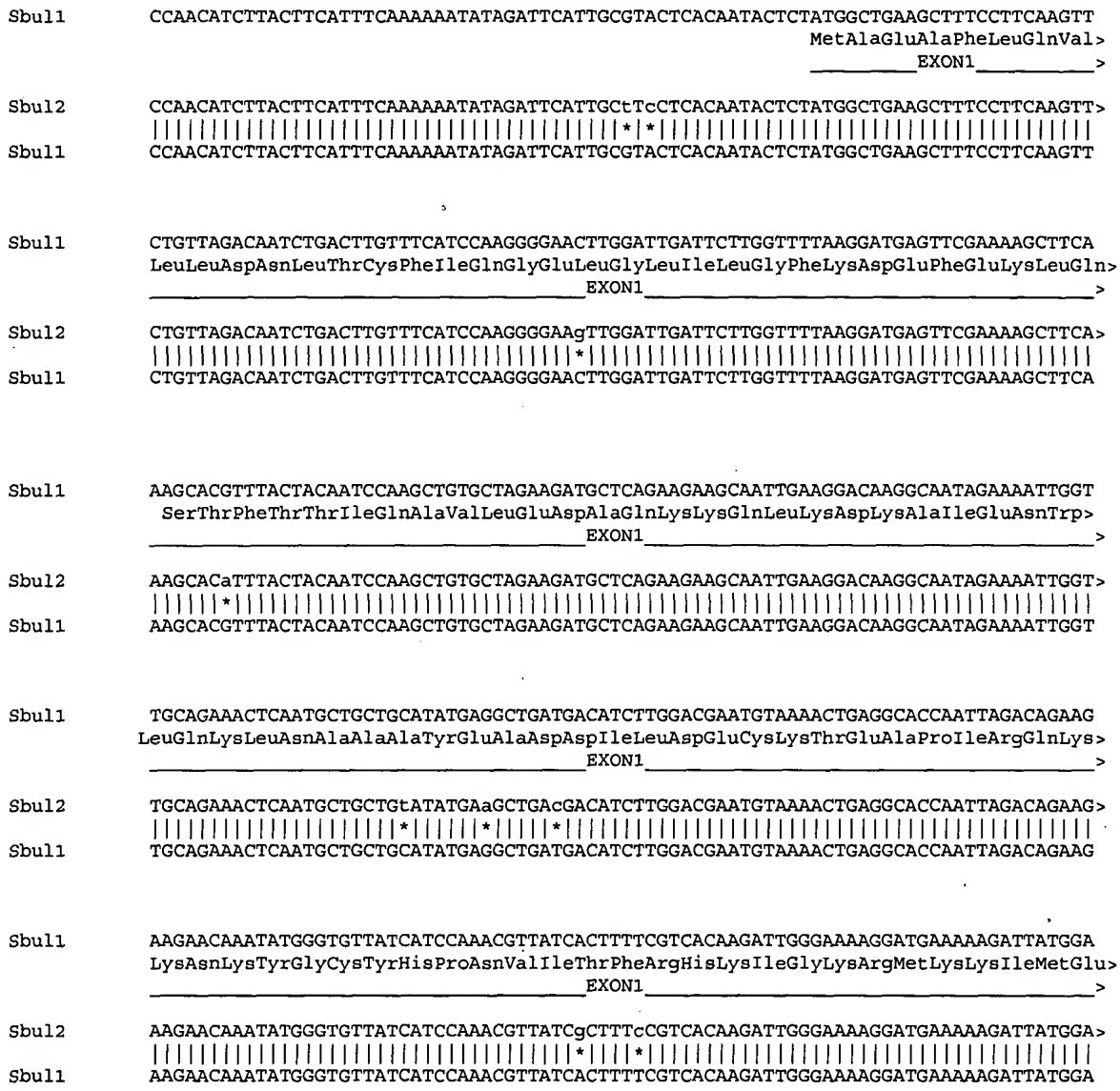
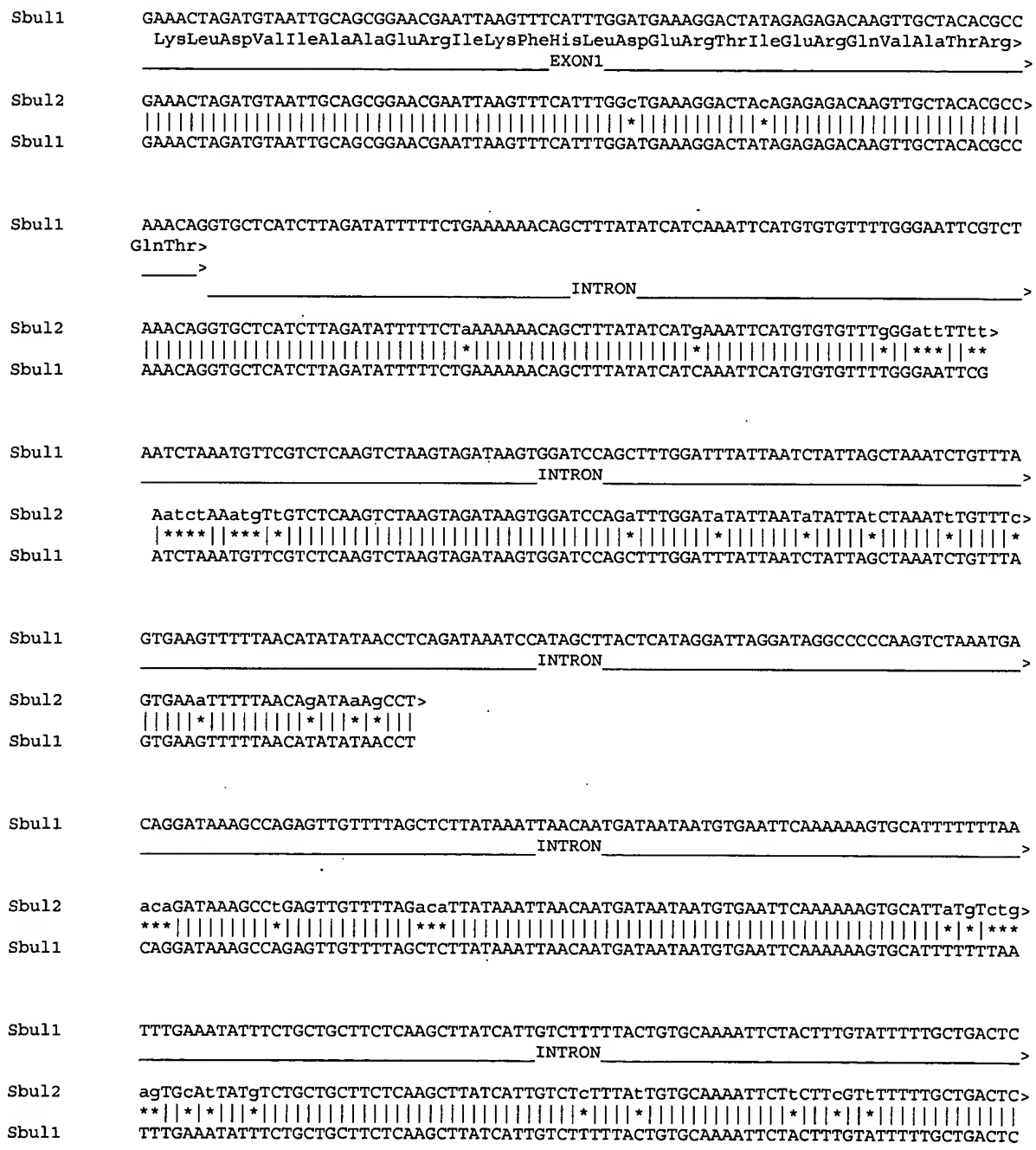


FIG. 7A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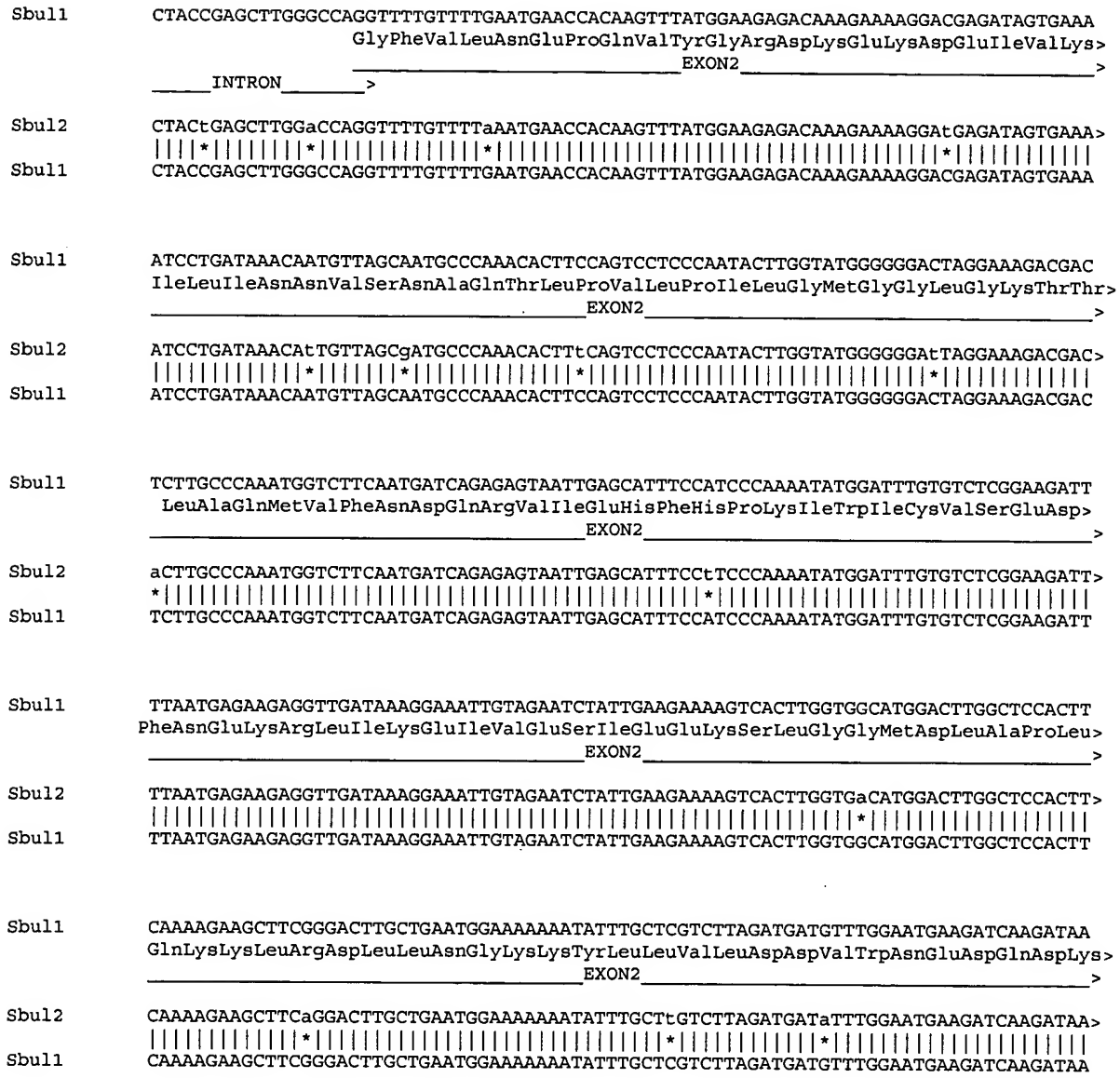
LysLeuAspValIleAlaAlaGluArgIleLysPheHisLeuAspGluArgThrIleGluArgGlnValAlaThrArg>
EXON1
Sbul2 GAAACTAGATGTAATTGCAGCGGAACGAATTAAGTTTCATTTGGcTGAAAGGACTAcAGAGAGACAAGTTGCTACACGCC>
Sbul1 GAAACTAGATGTAATTGCAGCGGAACGAATTAAGTTTCATTTGGATGAAAGGACTATAGAGAGACAAGTTGCTACACGCC
Sbul1 AAACAGGTGCTCATCTTAGATATTTTTCTGAAAAAACAGCTTTATATCATCAAATTCATGTGTGTTTTGGGAATTCGTCT
GlnThr>
INTRON
Sbul2 AAACAGGTGCTCATCTTAGATATTTTTCTaAAAAAACAGCTTTATATCATgAAATTCATGTGTGTTTgGGattTTtt>
Sbul1 AAACAGGTGCTCATCTTAGATATTTTTCTGAAAAAACAGCTTTATATCATCAAATTCATGTGTGTTTTGGGAATTCG
Sbul1 AATCTAAATGTTCGTCTCAAGTCTAAGTAGATAAGTGGATCCAGCTTTGGATTTATTAATCTATTAGCTAAATCTGTTTA
INTRON
Sbul2 AatctAAatgTtGTCTCAAGTCTAAGTAGATAAGTGGATCCAGaTTTGGATaTATTAATaTATTAtCTAAATtTGTTTc>
Sbul1 ATCTAAATGTTCGTCTCAAGTCTAAGTAGATAAGTGGATCCAGCTTTGGATTTATTAATCTATTAGCTAAATCTGTTTA
Sbul1 GTGAAGTTTTTAACATATATAACCTCAGATAAATCCATAGCTTACTCATAGGATTAGGATAGGCCCCCAAGTCTAAATGA
INTRON
Sbul2 GTGAAaTTTTTAACAgATAaAgCCT>
Sbul1 GTGAAGTTTTTAACATATATAACCT
Sbul1 CAGGATAAAGCCAGAGTTGTTTTAGCTCTTATAAATTAACAATGATAATAATGTGAATTCAAAAAAGTGCATTTTTTTAA
INTRON
Sbul2 acaGATAAAGCCtGAGTTGTTTTAGacaTTATAAATTAACAATGATAATAATGTGAATTCAAAAAAGTGCATTaTgTctg>
Sbul1 CAGGATAAAGCCAGAGTTGTTTTAGCTCTTATAAATTAACAATGATAATAATGTGAATTCAAAAAAGTGCATTTTTTTAA
Sbul1 TTTGAAATATTTCTGCTGCTTCTCAAGCTTATCATTGTCTTTTTACTGTGCAAAATTCTACTTTGTATTTTTGCTGACTC
INTRON
Sbul2 agTGcAtTATgTCTGCTGCTTCTCAAGCTTATCATTGTCTcTTTAtTGTGCAAAATTCTtCTTcGTtTTTTTGCTGACTC>
Sbul1 TTTGAAATATTTCTGCTGCTTCTCAAGCTTATCATTGTCTTTTTACTGTGCAAAATTCTACTTTGTATTTTTGCTGACTC

FIG. 7B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GlyPheValLeuAsnGluProGlnValTyrGlyArgAspLysGluLysAspGluIleValLys>
EXON2
INTRON
Sbul2
CTACtGAGCTTGGaCCAGGTTTTGTTTTaAATGAACCACAAGTTTATGGAAGAGACAAAGAAAAGGAtGAGATAGTGAAA>
Sbul1
CTACCGAGCTTGGGCCAGGTTTTGTTTTGAATGAACCACAAGTTTATGGAAGAGACAAAGAAAAGGACGAGATAGTGAAA
Sbul1
ATCCTGATAAACAATGTTAGCAATGCCCAAACACTTCCAGTCCTCCCAATACTTGGTATGGGGGGACTAGGAAAGACGAC
IleLeuIleAsnAsnValSerAsnAlaGlnThrLeuProValLeuProIleLeuGlyMetGlyGlyLeuGlyLysThrThr>
EXON2
Sbul2
ATCCTGATAAACAtTGTTAGCgATGCCCAAACACTTtCAGTCCTCCCAATACTTGGTATGGGGGGAtTAGGAAAGACGAC>
Sbul1
ATCCTGATAAACAATGTTAGCAATGCCCAAACACTTCCAGTCCTCCCAATACTTGGTATGGGGGGACTAGGAAAGACGAC
Sbul1
TCTTGCCCAAATGGTCTTCAATGATCAGAGAGTAATTGAGCATTTCCATCCCAAAATATGGATTTGTGTCTCGGAAGATT
LeuAlaGlnMetValPheAsnAspGlnArgValIleGluHisPheHisProLysIleTrpIleCysValSerGluAsp>
EXON2
Sbul2
aCTTGCCCAAATGGTCTTCAATGATCAGAGAGTAATTGAGCATTTCCtTCCCAAAATATGGATTTGTGTCTCGGAAGATT>
Sbul1
TCTTGCCCAAATGGTCTTCAATGATCAGAGAGTAATTGAGCATTTCCATCCCAAAATATGGATTTGTGTCTCGGAAGATT
Sbul1
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PheAsnGluLysArgLeuIleLysGluIleValGluSerIleGluGluLysSerLeuGlyGlyMetAspLeuAlaProLeu>
EXON2
Sbul2
TTAATGAGAAGAGGTTGATAAAGGAAATTGTAGAATCTATTGAAGAAAAGTCACTTGGTGaCATGGACTTGGCTCCACTT>
Sbul1
TTAATGAGAAGAGGTTGATAAAGGAAATTGTAGAATCTATTGAAGAAAAGTCACTTGGTGGCATGGACTTGGCTCCACTT
Sbul1
CAAAAGAAGCTTCGGGACTTGCTGAATGGAAAAAAATATTTGCTCGTCTTAGATGATGTTTGGAATGAAGATCAAGATAA
GlnLysLysLeuArgAspLeuLeuAsnGlyLysLysTyrLeuLeuValLeuAspAspValTrpAsnGluAspGlnAspLys>
EXON2
Sbul2
CAAAAGAAGCTTCaGGACTTGCTGAATGGAAAAAAATATTTGCTtGTCTTAGATGATaTTTGGAATGAAGATCAAGATAA>
Sbul1
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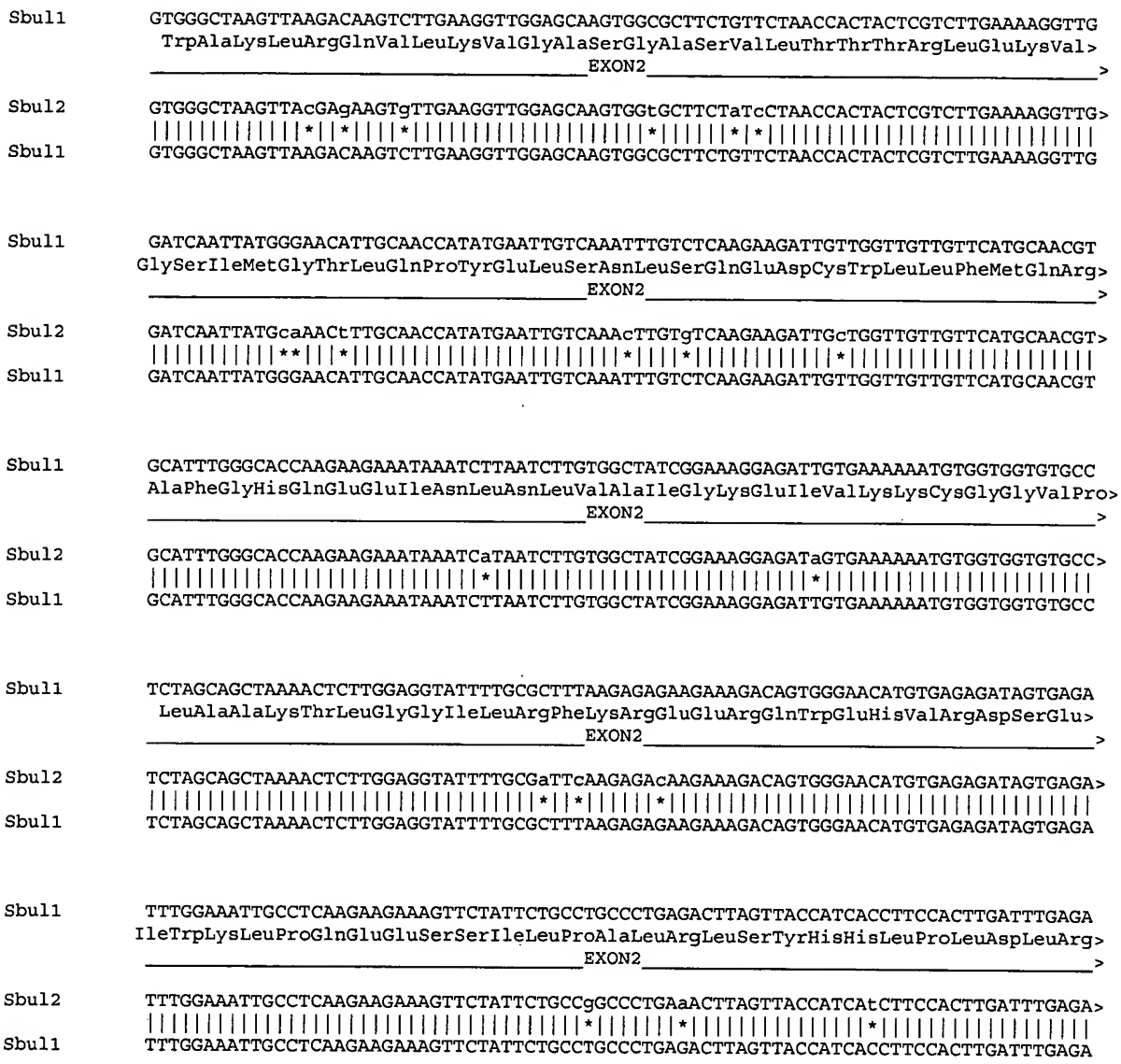
FIG. 7C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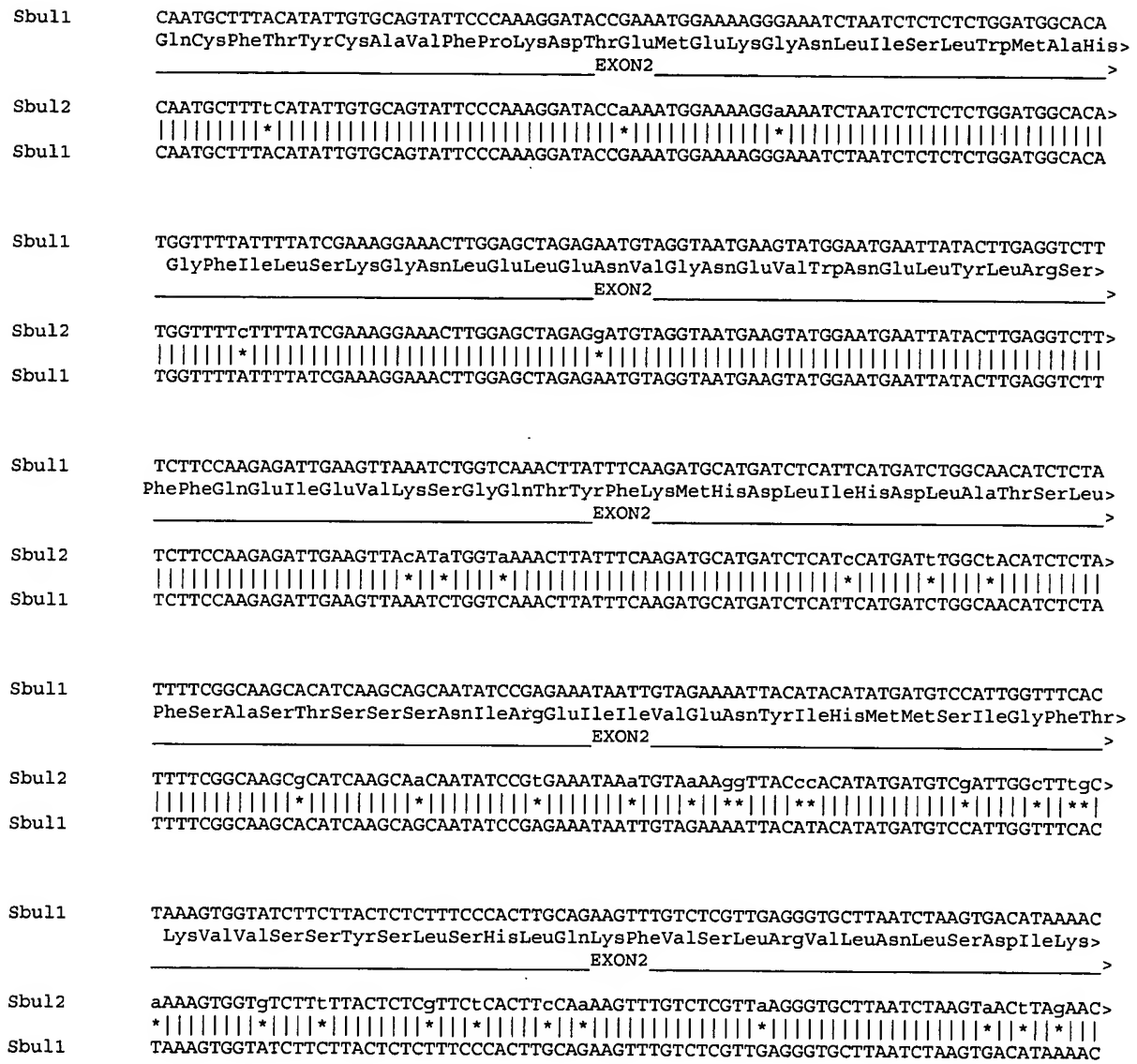
EXON2
Sbul2 GTGGGCTAAGTTAcGAgAAGTgTTGAAGGTTGGAGCAAGTGGtGCTTCTaTcCTAACCACTACTCGTCTTGAAAAGGTTG>
Sbul1 GTGGGCTAAGTTAAGACAAGTCTTGAAGGTTGGAGCAAGTGGCGCTTCTGTTCTAACCACTACTCGTCTTGAAAAGGTTG
Sbul1 GATCAATTATGGGAACATTGCAACCATATGAATTGTCAAATTTGTCTCAAGAAGATTGTTGGTTGTTGTTCATGCAACGT
GlySerIleMetGlyThrLeuGlnProTyrGluLeuSerAsnLeuSerGlnGluAspCysTrpLeuLeuPheMetGlnArg>
EXON2
Sbul2 GATCAATTATGcaAACtTTGCAACCATATGAATTGTCAAAcTTGTgTCAAGAAGATTGcTGGTTGTTGTTCATGCAACGT>
Sbul1 GATCAATTATGGGAACATTGCAACCATATGAATTGTCAAATTTGTCTCAAGAAGATTGTTGGTTGTTGTTCATGCAACGT
Sbul1 GCATTTGGGCACCAAGAAGAAATAAATCTTAATCTTGTGGCTATCGGAAAGGAGATTGTGAAAAAATGTGGTGGTGTGCC
AlaPheGlyHisGlnGluGluIleAsnLeuAsnLeuValAlaIleGlyLysGluIleValLysLysCysGlyGlyValPro>
EXON2
Sbul2 GCATTTGGGCACCAAGAAGAAATAAATCaTAATCTTGTGGCTATCGGAAAGGAGATaGTGAAAAAATGTGGTGGTGTGCC>
Sbul1 GCATTTGGGCACCAAGAAGAAATAAATCTTAATCTTGTGGCTATCGGAAAGGAGATTGTGAAAAAATGTGGTGGTGTGCC
Sbul1 TCTAGCAGCTAAAACTCTTGGAGGTATTTTGCGCTTTAAGAGAGAAGAAAGACAGTGGGAACATGTGAGAGATAGTGAGA
LeuAlaAlaLysThrLeuGlyGlyIleLeuArgPheLysArgGluGluArgGlnTrpGluHisValArgAspSerGlu>
EXON2
Sbul2 TCTAGCAGCTAAAACTCTTGGAGGTATTTTGCGaTTcAAGAGAcAAGAAAGACAGTGGGAACATGTGAGAGATAGTGAGA>
Sbul1 TCTAGCAGCTAAAACTCTTGGAGGTATTTTGCGCTTTAAGAGAGAAGAAAGACAGTGGGAACATGTGAGAGATAGTGAGA
Sbul1 TTTGGAAATTGCCTCAAGAAGAAAGTTCTATTCTGCCTGCCCTGAGACTTAGTTACCATCACCTTCCACTTGATTTGAGA
IleTrpLysLeuProGlnGluGluSerSerIleLeuProAlaLeuArgLeuSerTyrHisHisLeuProLeuAspLeuArg>
EXON2
Sbul2 TTTGGAAATTGCCTCAAGAAGAAAGTTCTATTCTGCCgGCCCTGAaACTTAGTTACCATCAtCTTCCACTTGATTTGAGA>
Sbul1 TTTGGAAATTGCCTCAAGAAGAAAGTTCTATTCTGCCTGCCCTGAGACTTAGTTACCATCACCTTCCACTTGATTTGAGA

FIG. 7D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EXON2
Sbul2
CAATGCTTTtCATATTGTGCAGTATTCCCAAAGGATACCaAAATGGAAAAGGaAAATCTAATCTCTCTCTGGATGGCACA>
Sbul1
CAATGCTTTACATATTGTGCAGTATTCCCAAAGGATACCGAAATGGAAAAGGGAAATCTAATCTCTCTCTGGATGGCACA
Sbul1
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GlyPheIleLeuSerLysGlyAsnLeuGluLeuGluAsnValGlyAsnGluValTrpAsnGluLeuTyrLeuArgSer>
EXON2
Sbul2
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Sbul1
TGGTTTTATTTTATCGAAAGGAAACTTGGAGCTAGAGAATGTAGGTAATGAAGTATGGAATGAATTATACTTGAGGTCTT
Sbul1
TCTTCCAAGAGATTGAAGTTAAATCTGGTCAAACTTATTTCAAGATGCATGATCTCATTCATGATCTGGCAACATCTCTA
PhePheGlnGluIleGluValLysSerGlyGlnThrTyrPheLysMetHisAspLeuIleHisAspLeuAlaThrSerLeu>
EXON2
Sbul2
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Sbul1
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Sbul1
TTTTCGGCAAGCACATCAAGCAGCAATATCCGAGAAATAATTGTAGAAAATTACATACATATGATGTCCATTGGTTTCAC
PheSerAlaSerThrSerSerSerAsnIleArgGluIleIleValGluAsnTyrIleHisMetMetSerIleGlyPheThr>
EXON2
Sbul2
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Sbul1
TTTTCGGCAAGCACATCAAGCAGCAATATCCGAGAAATAATTGTAGAAAATTACATACATATGATGTCCATTGGTTTCAC
Sbul1
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LysValValSerSerTyrSerLeuSerHisLeuGlnLysPheValSerLeuArgValLeuAsnLeuSerAspIleLys>
EXON2
Sbul2
aAAAGTGGTgTCTTtTTACTCTCgTTCtCACTTcCAaAAGTTTGTCTCGTTaAGGGTGCTTAATCTAAGTaACtTAgAAC>
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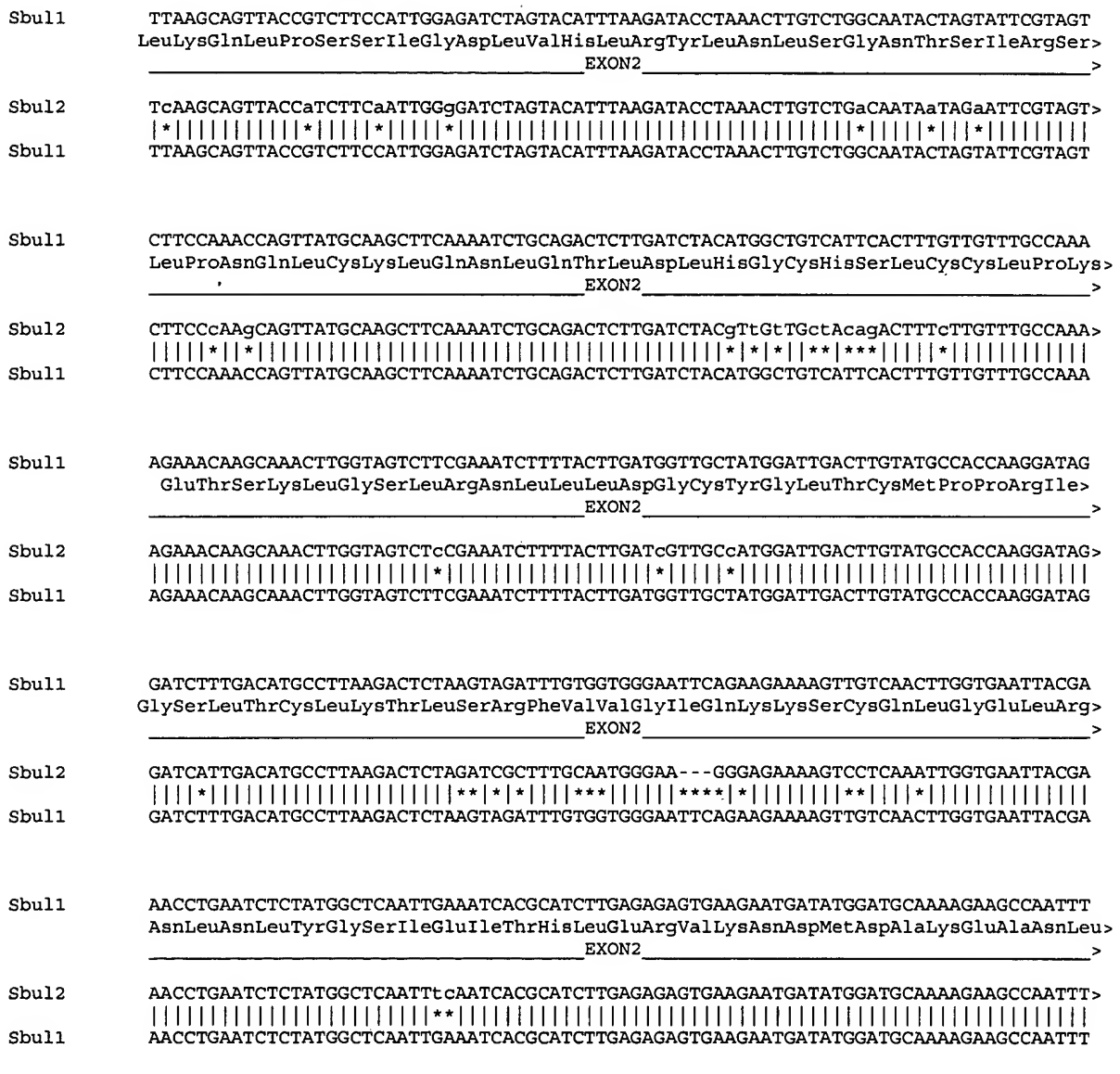
FIG. 7E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EXON2
Sbul2 TcAAGCAGTTACCaTCTTCaATTGGGgGATCTAGTACATTTAAGATACCTAAACTTGTCTGaCAATAaTAGaATTCGTAGT>
Sbul1 TTAAGCAGTTACCGTCTTCCATTGGAGATCTAGTACATTTAAGATACCTAAACTTGTCTGGCAATACTAGTATTCGTAGT
Sbul1 CTTCCAAACCAGTTATGCAAGCTTCAAAATCTGCAGACTCTTGATCTACATGGCTGTCATTCACTTTGTTGTTTGCCAAA
LeuProAsnGlnLeuCysLysLeuGlnAsnLeuGlnThrLeuAspLeuHisGlyCysHisSerLeuCysCysLeuProLys>
EXON2
Sbul2 CTTCCcAAgCAGTTATGCAAGCTTCAAAATCTGCAGACTCTTGATCTACgTtGtTGctAcagACTTTcTTGTTTGCCAAA>
Sbul1 CTTCCAAACCAGTTATGCAAGCTTCAAAATCTGCAGACTCTTGATCTACATGGCTGTCATTCACTTTGTTGTTTGCCAAA
Sbul1 AGAAACAAGCAAACTTGGTAGTCTTCGAAATCTTTTACTTGATGGTTGCTATGGATTGACTTGTATGCCACCAAGGATAG
GluThrSerLysLeuGlySerLeuArgAsnLeuLeuLeuAspGlyCysTyrGlyLeuThrCysMetProProArgIle>
EXON2
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Sbul1 AGAAACAAGCAAACTTGGTAGTCTTCGAAATCTTTTACTTGATGGTTGCTATGGATTGACTTGTATGCCACCAAGGATAG
Sbul1 GATCTTTGACATGCCTTAAGACTCTAAGTAGATTTGTGGTGGGAATTCAGAAGAAAAGTTGTCAACTTGGTGAATTACGA
GlySerLeuThrCysLeuLysThrLeuSerArgPheValValGlyIleGlnLysLysSerCysGlnLeuGlyGluLeuArg>
EXON2
Sbul2 GATCATTGACATGCCTTAAGACTCTAGATCGCTTTGCAATGGGAA---GGGAGAAAAGTCCTCAAATTGGTGAATTACGA
Sbul1 GATCTTTGACATGCCTTAAGACTCTAAGTAGATTTGTGGTGGGAATTCAGAAGAAAAGTTGTCAACTTGGTGAATTACGA
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EXON2
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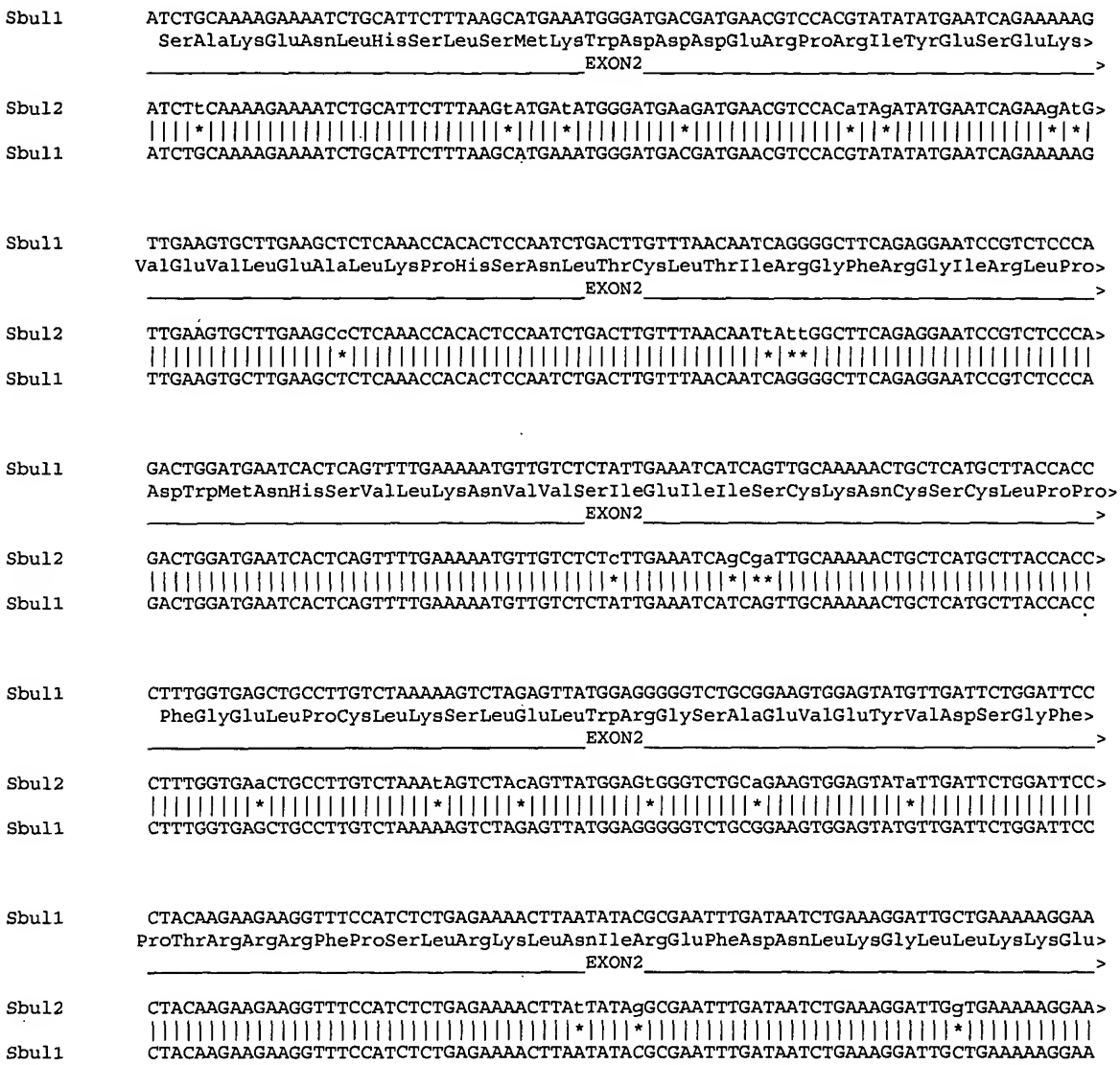
FIG. 7F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EXON2
Sbul2 ATCTtCAAAAGAAAATCTGCATTCTTTAAGtATGAtATGGGATGAaGATGAACGTCCACaTAgATATGAATCAGAAgAtG>
Sbul1 ATCTGCAAAAGAAAATCTGCATTCTTTAAGCATGAAATGGGATGACGATGAACGTCCACGTATATATGAATCAGAAAAAG
Sbul1 TTGAAGTGCTTGAAGCTCTCAAACCACACTCCAATCTGACTTGTTTAACAATCAGGGGCTTCAGAGGAATCCGTCTCCCA
ValGluValLeuGluAlaLeuLysProHisSerAsnLeuThrCysLeuThrIleArgGlyPheArgGlyIleArgLeuPro>
EXON2
Sbul2 TTGAAGTGCTTGAAGCcCTCAAACCACACTCCAATCTGACTTGTTTAACAATtAttGGCTTCAGAGGAATCCGTCTCCCA>
Sbul1 TTGAAGTGCTTGAAGCTCTCAAACCACACTCCAATCTGACTTGTTTAACAATCAGGGGCTTCAGAGGAATCCGTCTCCCA
Sbul1 GACTGGATGAATCACTCAGTTTTGAAAAATGTTGTCTCTATTGAAATCATCAGTTGCAAAAACTGCTCATGCTTACCACC
AspTrpMetAsnHisSerValLeuLysAsnValValSerIleGluIleIleSerCysLysAsnCysSerCysLeuProPro>
EXON2
Sbul2 GACTGGATGAATCACTCAGTTTTGAAAAATGTTGTCTCTcTTGAAATCAgCgaTTGCAAAAACTGCTCATGCTTACCACC>
Sbul1 GACTGGATGAATCACTCAGTTTTGAAAAATGTTGTCTCTATTGAAATCATCAGTTGCAAAAACTGCTCATGCTTACCACC
Sbul1 CTTTGGTGAGCTGCCTTGTCTAAAAAGTCTAGAGTTATGGAGGGGGTCTGCGGAAGTGGAGTATGTTGATTCTGGATTCC
PheGlyGluLeuProCysLeuLysSerLeuGluLeuTrpArgGlySerAlaGluValGluTyrValAspSerGlyPhe>
EXON2
Sbul2 CTTTGGTGAaCTGCCTTGTCTAAAtAGTCTAcAGTTATGGAGtGGGTCTGCaGAAGTGGAGTATaTTGATTCTGGATTCC>
Sbul1 CTTTGGTGAGCTGCCTTGTCTAAAAAGTCTAGAGTTATGGAGGGGGTCTGCGGAAGTGGAGTATGTTGATTCTGGATTCC
Sbul1 CTACAAGAAGAAGGTTTCCATCTCTGAGAAAACTTAATATACGCGAATTTGATAATCTGAAAGGATTGCTGAAAAAGGAA
ProThrArgArgArgPheProSerLeuArgLysLeuAsnIleArgGluPheAspAsnLeuLysGlyLeuLeuLysLysGlu>
EXON2
Sbul2 CTACAAGAAGAAGGTTTCCATCTCTGAGAAAACTTAtTATAgGCGAATTTGATAATCTGAAAGGATTGgTGAAAAAGGAA>
Sbul1 CTACAAGAAGAAGGTTTCCATCTCTGAGAAAACTTAATATACGCGAATTTGATAATCTGAAAGGATTGCTGAAAAAGGAA

FIG. 7G

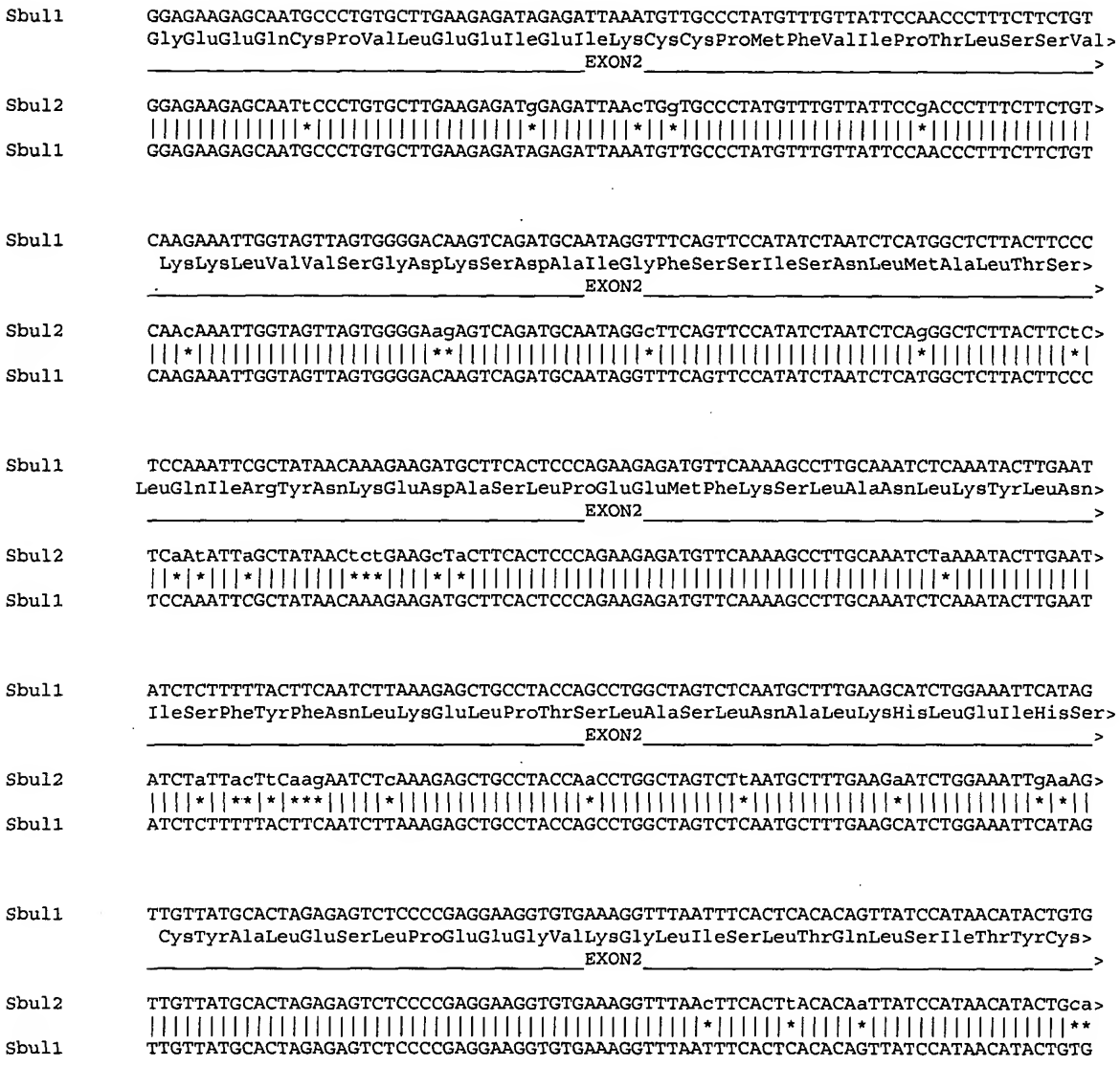
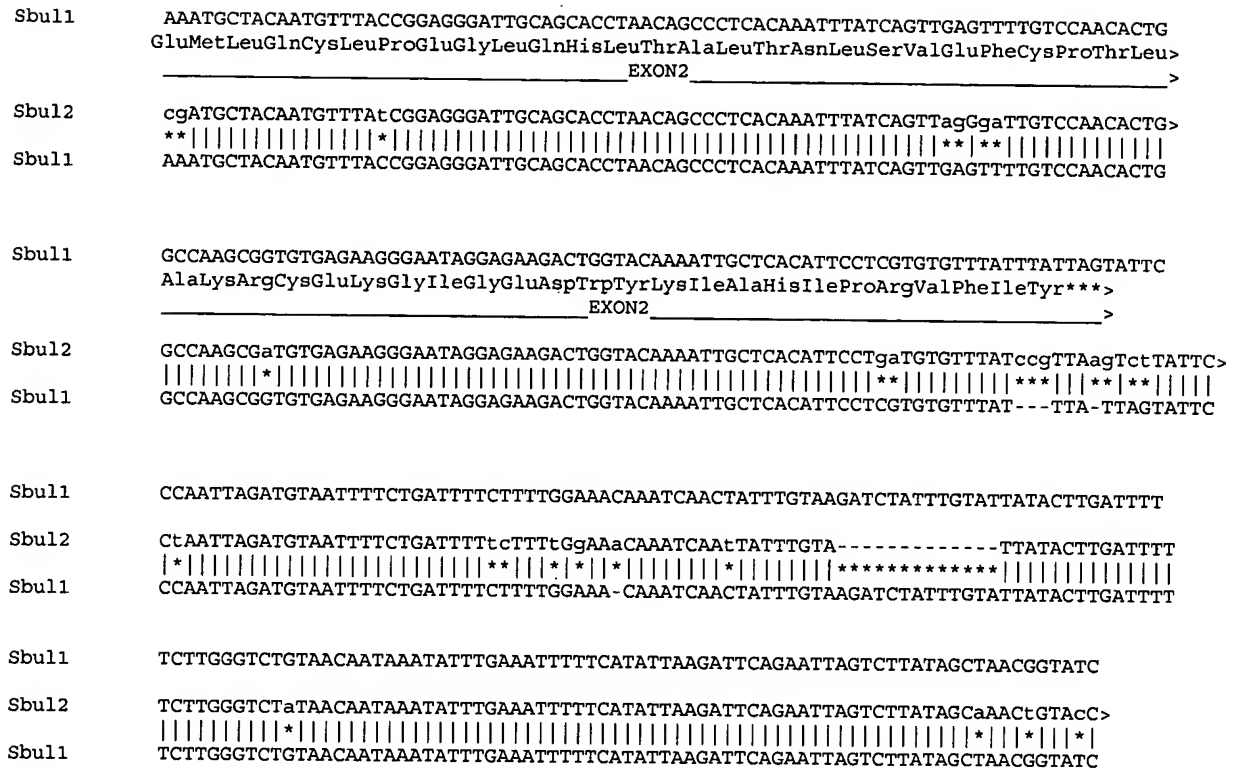

Sbul1 GGAGAAGAGCAATGCCCTGTGCTTGAAGAGATAGAGATTAAATGTTGCCCTATGTTTGTTATTCCAACCCTTTCTTCTGT
GlyGluGluGlnCysProValLeuGluGluIleGluIleLysCysCysProMetPheValIleProThrLeuSerSerVal>
EXON2
Sbul2 GGAGAAGAGCAATtCCCTGTGCTTGAAGAGATgGAGATTAAcTGgTGCCCTATGTTTGTTATTCCgACCCTTTCTTCTGT>
Sbul1 GGAGAAGAGCAATGCCCTGTGCTTGAAGAGATAGAGATTAAATGTTGCCCTATGTTTGTTATTCCAACCCTTTCTTCTGT
Sbul1 CAAGAAATTGGTAGTTAGTGGGGACAAGTCAGATGCAATAGGTTTCAGTTCCATATCTAATCTCATGGCTCTTACTTCCC
LysLysLeuValValSerGlyAspLysSerAspAlaIleGlyPheSerSerIleSerAsnLeuMetAlaLeuThrSer>
EXON2
Sbul2 CAAcAAATTGGTAGTTAGTGGGGAagAGTCAGATGCAATAGGcTTCAGTTCCATATCTAATCTCAgGGCTCTTACTTCtC>
Sbul1 CAAGAAATTGGTAGTTAGTGGGGACAAGTCAGATGCAATAGGTTTCAGTTCCATATCTAATCTCATGGCTCTTACTTCCC
Sbul1 TCCAAATTCGCTATAACAAAGAAGATGCTTCACTCCCAGAAGAGATGTTCAAAAGCCTTGCAAATCTCAAATACTTGAAT
LeuGlnIleArgTyrAsnLysGluAspAlaSerLeuProGluGluMetPheLysSerLeuAlaAsnLeuLysTyrLeuAsn>
EXON2
Sbul2 TCaAtATTaGCTATAACtctGAAGcTaCTTCACTCCCAGAAGAGATGTTCAAAAGCCTTGCAAATCTaAAATACTTGAAT>
Sbul1 TCCAAATTCGCTATAACAAAGAAGATGCTTCACTCCCAGAAGAGATGTTCAAAAGCCTTGCAAATCTCAAATACTTGAAT
Sbul1 ATCTCTTTTTACTTCAATCTTAAAGAGCTGCCTACCAGCCTGGCTAGTCTCAATGCTTTGAAGCATCTGGAAATTCATAG
IleSerPheTyrPheAsnLeuLysGluLeuProThrSerLeuAlaSerLeuAsnAlaLeuLysHisLeuGluIleHisSer>
EXON2
Sbul2 ATCTaTTacTtCaagAATCTcAAAGAGCTGCCTACCAaCCTGGCTAGTCTtAATGCTTTGAAGaATCTGGAAATTgAaAG>
Sbul1 ATCTCTTTTTACTTCAATCTTAAAGAGCTGCCTACCAGCCTGGCTAGTCTCAATGCTTTGAAGCATCTGGAAATTCATAG
Sbul1 TTGTTATGCACTAGAGAGTCTCCCCGAGGAAGGTGTGAAAGGTTTAATTTCACTCACACAGTTATCCATAACATACTGTG
CysTyrAlaLeuGluSerLeuProGluGluGlyValLysGlyLeuIleSerLeuThrGlnLeuSerIleThrTyrCys>
EXON2
Sbul2 TTGTTATGCACTAGAGAGTCTCCCCGAGGAAGGTGTGAAAGGTTTAAcTTCACTtACACAaTTATCCATAACATACTGca>
Sbul1 TTGTTATGCACTAGAGAGTCTCCCCGAGGAAGGTGTGAAAGGTTTAATTTCACTCACACAGTTATCCATAACATACTGTG

FIG. 7H


Sbul1
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GluMetLeuGlnCysLeuProGluGlyLeuGlnHisLeuThrAlaLeuThrAsnLeuSerValGluPheCysProThrLeu>
EXON2
Sbul2
cgATGCTACAATGTTTAtCGGAGGGATTGCAGCACCTAACAGCCCTCACAAATTTATCAGTTagGgaTTGTCCAACACTG>
Sbul1
AAATGCTACAATGTTTACCGGAGGGATTGCAGCACCTAACAGCCCTCACAAATTTATCAGTTGAGTTTTGTCCAACACTG
Sbul1
GCCAAGCGGTGTGAGAAGGGAATAGGAGAAGACTGGTACAAAATTGCTCACATTCCTCGTGTGTTTATTTATTAGTATTC
AlaLysArgCysGluLysGlyIleGlyGluAspTrpTyrLysIleAlaHisIleProArgValPheIleTyr***>
EXON2
Sbul2
GCCAAGCGaTGTGAGAAGGGAATAGGAGAAGACTGGTACAAAATTGCTCACATTCCTgaTGTGTTTATccgTTAagTctTATTC>
Sbul1
GCCAAGCGGTGTGAGAAGGGAATAGGAGAAGACTGGTACAAAATTGCTCACATTCCTCGTGTGTTTAT---TTA-TTAGTATTC
Sbul1
CCAATTAGATGTAATTTTCTGATTTTCTTTTGGAAACAAATCAACTATTTGTAAGATCTATTTGTATTATACTTGATTTT
Sbul2
CtAATTAGATGTAATTTTCTGATTTTtcTTTtGgAAaCAAATCAAtTATTTGTA----------TTATACTTGATTTT
Sbul1
CCAATTAGATGTAATTTTCTGATTTTCTTTTGGAAA-CAAATCAACTATTTGTAAGATCTATTTGTATTATACTTGATTTT
Sbul1
TCTTGGGTCTGTAACAATAAATATTTGAAATTTTTCATATTAAGATTCAGAATTAGTCTTATAGCTAACGGTATC
Sbul2
TCTTGGGTCTaTAACAATAAATATTTGAAATTTTTCATATTAAGATTCAGAATTAGTCTTATAGCaAACtGTAcC>
Sbul1
TCTTGGGTCTGTAACAATAAATATTTGAAATTTTTCATATTAAGATTCAGAATTAGTCTTATAGCTAACGGTATC

FIG. 7I

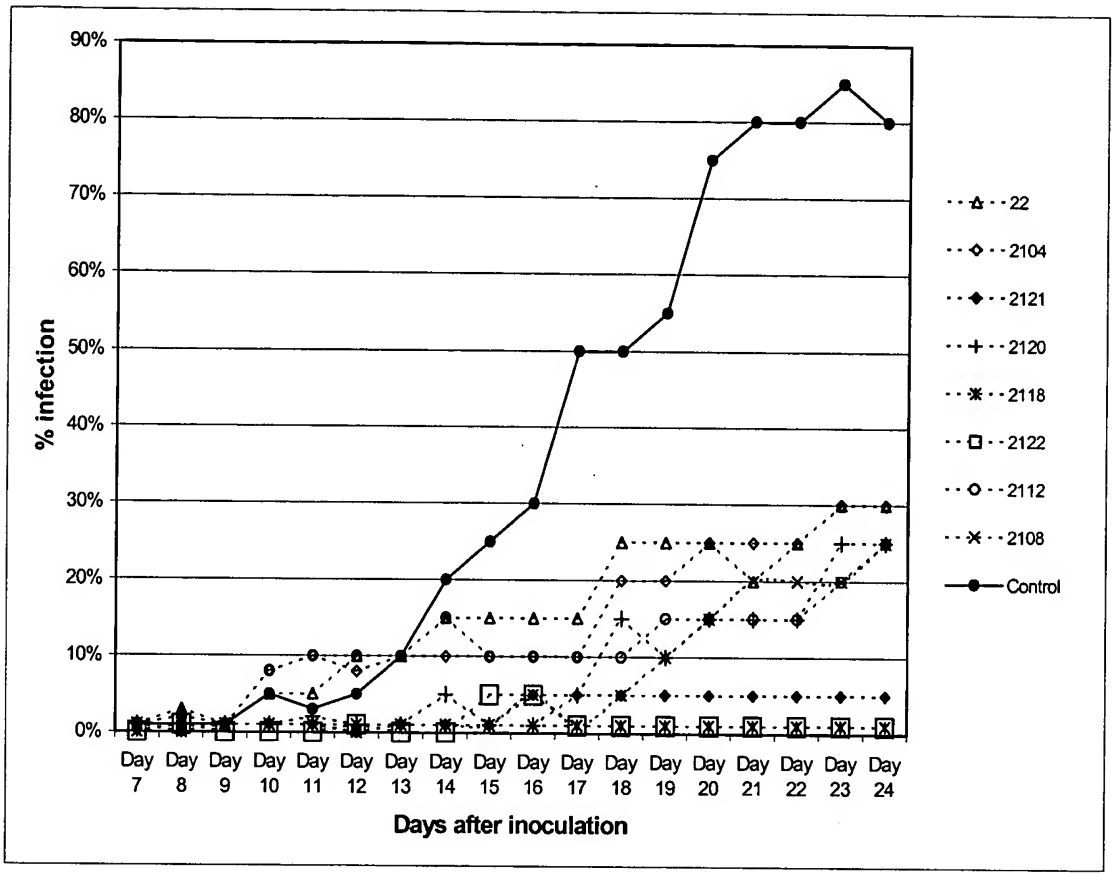
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
% infection
Day 7
Day 8
Day 9
Day 10
Day 11
Day 12
Day 13
Day 14
Day 15
Day 16
Day 17
Day 18
Day 19
Day 20
Day 21
Day 22
Day 23
Day 24
Days after inoculation
22
2104
2121
2120
2118
2122
2112
2108
Control

FIG. 8